PII: S0030-3992(97)00000-0

Optics & Laser Technology

Index to Volume 29 (1997)

No 1 (February) pp 1–56 + xvi
No 2 (March) pp 57–110 + xvii
No 3 (April pp 111–164 + x
No 4 (June) pp 165–232 + xii
No 5 (July) pp 233–292 + xii
No 6 (September) pp 293–354 + x
No 7 (October) pp 355–420 + xiv
No 8 (November) pp 421–528 + xii

Article Index

Number 1

Special issue—Underwater optics

Editorial—Underwater optics: light in the sea
J. Watson 1

Observations of diffuse upwelling irradiance and chlorophyll in case I waters near the Canary Islands (Spain)
K. Wild-Allen, P. Tett, D. Bowers 3

The influence of optical properties of shallow shelf seas on temperature structure and acoustic propagation
J. R. Martin, A. J. Bristow, E. Stevens 9

Holography for underwater inspection and measurement: an overview of current work
E. Foster, J. Watson 17

A preliminary study of the distribution of plankton using holograммetry
P. R. Hobson, E. P. Krantz, R. S. Lampitt, A. Rogerson, J. Watson 25

An integrated submersible fluorometer/nephelometer/transmissometer: design and testing at sea
D. McKee, A. Cunningham, K. Jones 35

Using the MARAS system for the *in situ* characterizing of the spectral optical properties of the North Sea
S. Green, E. O'Mongain, B. Moore, R. Doerffer, H. Hakvoort, S. Danaher, D. Buckton, J. Kennedy, D. Papantoniou, I. Lazaridis, F. Fell, M. McGarrigle 41

Underwater CCD cameras for PIV flow mapping
A. D. Arnott, T. P. Dewhirst, J. Pullen, C. A. Greated 45

Low-order adaptive optics: a possible use in underwater imaging
M. L. Holohan, J. C. Dainty 51

Number 2

A Nd:YAG laser with a flat-top beam profile and constant divergence
W. C. Yen, C. T. Huang, H. P. Liu, L. P. Lee 57

Measuring the thickness and refractive index of a thick transparent plate by an unexpanded laser beam
S. Y. El-Zaiat 63

Unidirectional laser oblique illumination (ULOI): a comparison with partial dark field illumination (PDFI) in the optical microscopy of metals
F. Povolo, A. Canzian, E. Favret 67

Laser sintering of green compacts
Hu Jiandong, Guo Zuoxing, Guan Qingfeng, Li Yulong 75

Simplified technique of fabricating dielectric-coated silver hollow nickel waveguides by the outer-coating method of the liquid phase process
Y. Abe, T. Watanabe, H. Hiraga, M. Miyagi 79

Broad-band optical isolator
P. Hariharan, P. E. Ciddor 83

Microlens arrays for confocal microscopy
H. J. Tiziani, R. Achi, R. N. Krämer, T. Hessler, M. T. Gale, M. Rossi, R. E. Kunz 85

A study on spatial coherence using quadratic radially distributed apertures (application to confocal imaging)
A. M. Hamed 93

Digital image processing for evaluating the characteristics of the microstructure of a holographic plate
C.-S. Lin, R.-S. Chang 97

Geometrical forms of Abelès' equations involving film thickness
L. Ward 103

Technical note

Measuring laser divergence
B. A. See 109

Number 3

Displacement and slope measurements using image plane holography with a $BaTiO_3$ crystal
P. R. Sreedhar, N. Krishna Mohan, R. S. Sirohi 111

Interferometric investigation of the effects, on the refractive index of PVA, of doping with lead acetate and gamma irradiation
S. Y. El-Zaiat, H. El-Ghandoor, F. Sharaf 117

A fibre-optic thermometric sensor based on the thermo-optic effect of titanium dioxide coatings
M. Naci Inci, J. S. Barton, J. D. C. Jones 121

The effects of power rippling on CO_2 laser cutting
Shang-Liang Chen, W. O'Neil 125

On the modelling of the power extraction problems from a gas-dynamic CO_2 laser considering the variations of intensity
F. Shojaei, A. R. Bahrampour 135

Investigation of a Cr^{4+}:YAG passive Q-switch in CW pumped Nd:YAG lasers
T. Dascalu, G. Philipps, H. Weber 145

Optoelectronic symbolic substitution based canonical modified signed-digit arithmetic
A. K. Cherri, M. S. Alam, A. A. S. Awwal 149

Modified spin filter for noise reduction in aerodynamic imaging
G. Laufer, B. D. Westring, R. P. Marino 159

Number 4

Partially coherent imaging with Schell-model beams
R. Castañeda, F. F. Medina 165

Restoration of images degraded by extreme mechanical vibrations
O. Hadar, Z. Adar, A. Cotter, N. S. Kopeika 171

Contrast and sensitivity of the vibration fringes in time-averaged electronic speckle-pattern interferometry: effect of variations of force level
W. O. Wong, K. T. Chan, T. P. Leung 179

Integrated peak spectral intensity for *in situ* crack detection
C. J. Tay, H. M. Shang, M. R. Sajan 187

Article Index

(Continued)

Laser cutting of thick ceramic tile
I. Black, K. L. Chua 193

Diode-laser pumped 1.328 μm Nd:$Sr_5(PO_4)_3F$ miniature laser
Shengzhi Zhao, Qingpu Wang, Xingyu Zhang, Songtao Wang, Lu Zhao, Lianke Sun, Shaojun Zhang 207

High power CW solid-state multilaser system
I. Peshko, G. Galich, M. Lopiychuk, A. Khizhnyak, V. Nakvasuk 211

Apochromatic lens combinations: a novel design approach
P. Hariharan 217

Unified negabinary symbolic arithmetic for addition and subtraction with polarization-encoded optical shadow casting
Guoqiang Li, Liren Liu, Jianwen Hua, Lan Shao 221

Research note

Solid-state laser passively Q-switched in a new geometry
V. V. Ter-Mikirtychev 229

Number 5

Corner-cube four-detector photopolarimeter
J. Liu, R. M. A. Azzam 233

A two-dimensional vision system with optical ranging capability
M. J. Tsai, M. Zahid, J. S. Smith, J. Lucas 239

Quantitative evaluation of two-dimensional dynamic deformations using digital holography
G. Pedrini, H. J. Tiziani 249

Numerical propagation of partially coherent laser beams through optical systems
H. Gross 257

Moiré properties of Walsh functions
C. Colautti, O. Trabocchi, E. E. Sicre 261

Spectral characteristics of non-collinear acousto-optic tunable filters
G. Georgiev, L. Konstantinov 267

Application of a liquid crystal spatial light modulator on optical roughness measurements by a speckle correlation method using two refractive indices
M. Muramatsu, T. Eiju, T. Shirai, K. Matsuda 271

Effect of buffer gas on the generation of eye-safe 1.54 μm radiation using the stimulated Raman scattering technique in CH_4
K. Sentrayan, A. Michael, U. N. Singh, V. S. Kushawaha 275

One-step optical trinary signed-digit arithmetic using redundant bit representations
A. K. Cherri, N. I. Khachab, E. H. Ismail 281

Research note

An effective method of ensuring the uniformity of laser intensity in a larger expanded angle
T. G. Liu, Y. J. Lin 291

Number 6

Enhancing visibility through fog
L. Pirodda 293

Reduction of beam divergence of a thermal lensing insensitive Nd:YAG laser
W. C. Yen, H. P. Liu 301

Cutting by a high power laser at a long distance without an assist gas for dismantling
G. Tahmouch, P. Mayrueis, P. Grandjean 307

Efficient intra-cavity second harmonic generation by a diode-pumped actively Q-switched Nd:YAG laser
A. Agnesi, G. C. Reali, C. Solcia, P. G. Gobbi 317

Cascaded energy-optimized linear volume hologram array for 1-to-many surface-normal even fan-outs
J. Liu, C. Zhao, R. Lee, R. T. Chen 321

TDI imaging and scanning moiré for online defect detection
M. R. Sajan, C. J. Tay, H. M. Shang, A. Asundi 327

Compact phase-shifted Sagnac interferometer for ultrasound detection
P. A. Fomitchov, S. Krishnaswamy, J. D. Achenbach 333

The curvature measurement of the human eyeball
Yun Long Lay, Rong Seng Chang, Pei-Wen Chen, Ming-Chang Tu 339

Research Note

Dynamic moiré patterns produced by sinusoidal gratings superposition in the $Bi_{12}TiO_{20}$ crystal
P. A. M. Dos Santos, A. A. Tagliaferri 345

Technical Notes

Optimum pump-pulse duration for optical parametric oscillators
R. C. Bapna, K. Dasgupta, L. G. Nair 349

Slab CO_2 lasers excited by switching power
Wang Xinbing, Xu Qiyang, Xie Minjie, Li Zaiguang 353

Number 7

Fastscan *z*-scan system for determining optical non-linearities in semiconductors
I. J. Blewett, J. Stokes, A. Tookey, A. K. Kar, B. S. Wherrett 355

Mapping of vibration amplitudes by time average holography in $Bi_{12}SiO_{20}$ crystals
E. A. Barbosa, M. Muramatsu 359

A simple way for improving the identification of the central fringe in a fibre-optic white-light interferometer
L. Yuan 365

A curve fitting signal processing scheme for a white-light interferometric system with a synthetic source
Q. Wang, Y. N. Ning, K. T. V. Grattan, A. W. Palmer 371

Signal processing scheme for central position identification in a white-light interferometric system with a dual wavelength source
Q. Wang, Y. N. Ning, K. T. V. Grattan, A. W. Palmer 377

Fine structure in Fresnel diffraction patterns and its application in optical measurement
Fang Xiaoyong, Cao Maosheng, Zhou Yan, Ben Yongzhi, Qin Shiming 383

Optical trapping: a tool to assist optical machining
R. C. Gauthier 389

The influence of transverse structures on the coupling of solid-state lasers
H. Laabs, B. Ozygus 401

Laser and absorption saturation measurements of Cr^{4+} crystals, pumped by broadband pulsed 940 nm radiation
V. V. Ter-Mikirtychev, I. T. McKinnie, D. M. Warrington, Y. Kalisky, S. A. Pollack 407

Analysis of a DPSK soliton transmission system
P. Shum, H. Ghafouri-Shiraz, S. F. Yu 411

Research Note

An in-plane insensitive multiaperture speckle shear interferometer for slope measurement
R. S. Sirohi, N. Krishna Mohan 415

Technical Note

Expected performance of waveguide grating routers in the presence of random phase and amplitude errors
M. Zirngibl 419

Number 8

Optical noise in frequency-periodic networks excited by semiconductor lasers with non-Lorentzian lineshapes
X. Yu 421

Evaluation of defects on an optical disc master plate
C.-S. Lin 425

Nano-material processing with laser radiation in the near field of a scanning probe tip
J. Jersch, F. Demming, J. Hildenhagen, K. Dickmann 433

Design and performance of an excimer-laser based optical system for high precision microstructuring
K.-H. Gerlach, J. Jersch, K. Dickmann, L. J. Hildenhagen 439

Robust hollow devices and waveguides for Er:YAG laser radiation
Y. Wang, Y. Matsuura, M. Miyagi 449

Small-bore fluorocarbon polymer-coated silver hollow glass waveguides for Er:YAG laser light
Y. Wang, Y. W. Shi, Y. Matsuura, M. Miyagi 455

A peculiarity of diffraction measurements using a Gaussian laser beam
N. M. Gagina, D. B. Hann, B. S. Rinkevichius 463

A simple method for testing laser beam collimation
D. S. Mehta, H. C. Kandpal 469

Analysis and modelling of high power laser beam position sensing
Shang-Liang Chen 475

Enhancement of the relative visibility of the central fringe in the output of a white light interferometric system with a synthetic source
Q. Wang, Y. N. Ning, K. T. V. Grattan, A. W. Palmer 489

Application of multiple-beam white-light fringes for measuring the refraction and dispersion of mica
S. Y. El-Zaiat 495

Measurement of focal length for a spherical lens with a joint Fourier transform spectrum interferometer
Y. R. Wang, L. Z. Cai 501

Transient vibration measurements using multi-pulse digital holography
G. Pedrini, Ph. Fröning, H. Fessler, H. J. Tiziani 505

Multiple-prism near-grazing-incidence grating solid-state dye-laser oscillator
F. J. Duarte 513

Laser induced damage thresholds and laser safety levels. Do the units of measurement matter?
R. M. Wood 517

Author Index

Abe, Y., 79
Achenbach, J. D., 333
Achi, R., 85
Adar, Z., 171
Agnesi, A., 317
Alam, M. S., 151
Arnott, A. D., 45
Asundi, A., 327
Awwal, A. A. S., 151
Azzam, 233

Bahrampour, A. R., 135
Bapna, R. C., 349
Barbosa, E. A., 359
Barton, J. S., 121
Black, I., 193
Blewett, I. J., 355
Bowers, D., 3
Bristow, A. J., 9
Buckton, D., 41

Cai, L. Z., 501
Canzian, A., 67
Castañeda, R., 165
Chan, K. T., 179
Chang, R.-S., 97
Chang, Rong Seng, 339
Chen, Pei-Wen, 339
Chen, R. T., 321
Chen, S.-L., 125, 475
Cherri, A. K., 151, 281
Chua, K. L., 193
Ciddor, P. E., 83
Colautti, C., 261
Cotter, A., 171
Cunningham, A., 35

Dainty, J. C., 51
Danaher, S., 41
Dascalu, T., 145
Dasgupta, K., 349
Demming, F., 433
Dewhirst, T. P., 45
Dickmann, K., 433, 439
Doerer, R., 41
Dos Santos, P. A. M., 345
Duarte, F. J., 513

Eiju, T., 271
El-Ghandoor, H., 117
El-Zaiat, S. Y., 63, 117, 495

Favret, E., 67
Fell, F., 41
Fessler, H., 505
Fomitchov, P. A., 333
Foster, E., 17
Fröning, Ph., 505

Gagina, N. M., 463
Gale, M. T., 85
Galich, G., 211
Gauthier, R. C., 389
Georgiev, G., 267
Gerlach, K.-H., 439
Ghafouri-Shiraz, H., 411
Gobbi, P. G., 317
Grandjean, P., 307
Grattan, K. T. V., 371, 377, 489
Greated, C. A., 45
Green, S., 41
Gross, H., 257

Hadar, O., 171
Hakvoort, H., 41
Hamed, A. M., 93
Hann, D. B., 463
Hariharan, P., 83, 217
Hessler, T., 85
Hildenhagen, L. J., 433, 439
Hiraga, H., 79
Hobson, P. R., 25
Holohan, M. L., 51
Hua, J., 221
Huang, C. T., 57

Ismail, E. H., 281

Jersch, J., 433, 439
Jiandong, H., 75
Jones, J. D. C., 121
Jones, K., 35

Kalisky, Y., 407
Kandpal, H. C., 469
Kar, A. K., 355
Kennedy, J., 41
Khachab, N. I., 281
Khizhnyak, A., 211
Konstantinov, L., 267
Kopeika, N. S., 171
Krämer, R. N., 85
Krantz, E. P., 25
Krishna Mohan, N., 111, 415
Krishnaswamy, S., 333
Kunz, R. E., 85
Kushawaha, V. S., 275

Laabs, H., 401
Lampitt, R. S., 25
Laufer, G., 159
Lay, Yun Long, 339
Lazaridis, I., 41
Lee, L. P., 57
Lee, R., 321
Leung, T. P., 179
Li, G., 221
Lin, C.-S. 97, 425
Lin, Y. J., 291
Liu, H. P., 57, 301
Liu, J., 233, 321
Liu, L., 221
Lopiychuk, M., 211
Lucas, J., 239

Maosheng, Cao, 383
Marino, R. P., 159
Martin, J. R., 9
Matsuda, K., 271
Matsuura, Y., 449, 455
McGarrigle, M., 41
McKee, D., 35
McKinnie, I. T., 407
Medina, F. F., 165
Mehta, D. S., 469
Meyrueis, P., 307
Michael, A., 275
Minjie, Xie, 353
Miyagi, M., 79, 449, 455
Moore, B., 41
Muramatsu, M., 271, 359

Naci Inci, M., 121
Nair, L.G., 349
Nakvasuk, V., 211
Ning, Y. N., 371, 377, 489

O'Mongain, E., 41
O'Neil, W., 125
Ozygus, B., 401

Palmer, A. W., 371, 377, 489
Papantoniou, D., 41
Pedrini, G., 249, 505
Peshko, I., 211
Philipps, G., 145
Pirodda, L., 293
Pollack, S. A., 407
Povolo, F., 67
Pullen, J., 45

Qinfeng, G., 75
Qiyang, Xu, 353

Reali, G. C., 317
Rinkevichius, B. S., 463
Rogerson, A., 25
Rossi, M., 85

Sajan, M. R., 187, 327
See, B. A., 109
Sentrayan, K., 275
Shang, H. M., 187, 327
Shao, L., 221
Sharaf, F., 117
Shi, Y. W., 455
Shiming, Qin, 383
Shirai, T., 271
Shojaei, F., 135
Shum, P., 411
Sicre, E. E., 261
Singh, U. N., 275
Sirohi, R., 111
Sirohi, R. S., 415
Smith, J. S., 239
Solcia, C., 317
Sreedhar, P. R., 111
Stevens, E., 9
Stokes, J., 355
Sun, L., 207

Tagliaferri, A. A., 345
Tahmouch, G., 307
Tay, C. J., 187, 327
Ter-Mikirtychev, V. V., 229, 407
Tett, P., 3
Tiziani, H. J., 85, 249, 505
Tookey, A., 355
Trabocchi, O., 261
Tsai, M. J., 239
Tu, Ming-Chang, 339

Wang, Q., 207, 489, 371, 377
Wang, S., 207
Wang, Y., 449, 455
Wang, Y. R., 501
Ward, L., 103
Warrington, D. M., 407
Watanabe, T., 79
Watson, J., 1, 17, 25
Weber, H., 145
Westring, B. D., 159
Wherrett, B. S., 355
Wild-Allen, K., 3
Wong, W. O., 179
Wood, R. M., 517
Xiaoyong, Fang, 383
Xinbing, Wang, 353

Yan, Zhou, 383
Yen, W. C., 57
Yen, W. C., 301
Yongzhi, Ben, 383
Yu, S. F., 411
Yu. X., 421
Yuan, L., 365
Yulong, L., 75

Zahid, M., 239
Zaiguang, Li, 353
Zhang, S., 207
Zhang, X., 207
Zhao, C., 321
Zhao, L., 207
Zhao, S., 207
Zirngibl, M., 419
Zuoxing, G., 75

Keyword Index

Abelès' equations, 103
aberrations, 17
acousto-optic tunable filters, 267
acousto-optical Q-switches, 145
acousto-optics, 267
active Q-switching, 317
adaptive optics, 51
advanced cutting processes, 193
amplitude errors, 419
amplitude modulation, 93
apochromatic objectives, 217

beam conditioning optics, 439
beam diameter, 109
beam modulation, 229
beam parameter product, 211
beam position sensing, 475
beam propagation, 257
beam uniformity, 291
BSO crystals, 359

canonical binary representation, 151
CCD arrays, 45
Celtic Sea Front, 9
ceramic materials, 193
CH_4, 275
chlorophyll, 3
colour correction, 217
communication systems, 411
confocal imaging, 93
confocal microscopy, 85
constant divergence, 57
corner cubes, 233
coupling, 401
Cr^{4+} crystals, 407
Cr^{4+}:YAG passive Q-switches, 145
cross-spectral density, 165
crosstalk, 419
curvature, 339
curve fitting, 371

dichromated gelatin, 97
dielectric-coated hollow waveguides, 79
dierential phase-shift keying (DPSK), 411
digital holographic interferometry, 249, 505
digital imaging processing, 425
digital imaging, 159
diode-laser pumps, 207
dispersion measurement, 495
distortion aberration, 339
divergence, 109
drifting buoy, 3
dyes, 513
dynamic imaging moiré, 327

electronic speckle pattern interferometry (ESPI), 179
eye-safe radiation, 275

fan-out, 321
fatigue, 187
fibre transmission, 301
fibre-optics, 121, 211, 301, 307, 411
film quality characteristics, 97
film thickness, 103
fine structure in the diraction pattern, 383
flat-top, 57
fluorocarbon polymers, 449
focal length, 501
fog, 293
Fraunhofer diraction, 463
Fresnel diraction, 383
fringe identification, 365
fringes, 359, 365, 377, 489, 495

gamma irradiation, 117
gas-dynamic lasers, 135
Gaussian beams, 463
gratings, 261
grazing incidence, 513

hollow waveguides, 449, 455
hologrammetry, 17
holograms, 345
holography, 111
holography, 17, 25, 359

image processing, 159, 339
image restoration optomechanics, 171
imaging, 165
in situ crack detection, 187
infrared medical lasers, 455
inspection, 17
interferometers, 421, 501
interferometric systems, 377
interferometry, 117, 333, 365, 371, 377, 415, 489, 495, 501, 505
intra-cavity doubling, 317

joint Fourier transform spectrum, 501

large apertures, 291
laser beam collimation, 469
laser cutting, 125, 307
laser diodes, 293
laser dismantling, 307
laser induced damage threshold (LIDT), 517
laser metallography, 67
laser performance, 407
laser radar, 293
laser safety, 517
laser sintering, 75
laser-based ultrasonics, 333
lasers, 83, 187, 389, 517
lasers (CO_2), 125, 135, 193
  (diode-pumped), 317
  (Er:YAG), 449, 455
  (excimer), 439
  (HeNe), 63
  (infrared), 293, 455
  (multi-phase), 505
  (Nd:YAG), 57, 145, 211, 301, 307, 475
  (semiconductor), 421
  (slab CO_2, 353
  (solid-state), 229, 401, 407, 513
  (tunable), 349, 513
LEDs, 365
lens combinations, 217
liquid crystal spatial light modulators, 271

machine vision, 327
MARAS, 41
marine monitoring, 35
materials processing, 75
metrology, 25
mica, 495
micro optics, 85, 389
micro-particles, 97
microlens arrays, 85
microstructure fabrication, 389
microstrucuring, 439
mode matching, 109
mode shape, 179
moiré, 261, 345
moiré fringe patterns, 469
motion, 171
multi-phase holography, 505
multi-phase lasers, 505
multiaperture speckle shear interferometry, 415
multidimensional spatial carriers, 249
multiple prisms, 513
multiwavelength components, 83

nanoprocessing, 433
Nd:S-FAP crystals, 207
near field technology, 433
negabinary encoding, 221
neural networks, 425
non-destructive evaluation, 333
non-linear optics, 349, 355
non-Lorentzian lineshapes, 421
numerical computation, 257

ocean modelling, 9
ocean optics, 35
oshore structures, 45
one-dimensional periodicity, 469
ophthalmology, 339
optical components, 233
optical computing, 151, 221, 281
optical diagnostics, 159
optical discs, 425
optical fabrication, 389
optical fibres, 121, 211, 301, 307, 411
optical functions, 103
optical inspection, 327
optical instruments, 41
optical interconnects, 321
optical isolators, 83
optical measurement, 383
optical microscopy of metals, 67
optical parametric oscillators, 349
optical properties, 9
optical properties of sea, 41
optical ranging, 239
optical transfer function, 171
oscillators, 513
out-of-plane measurements, 249
outer-coating method, 79

parallel processing, 221
partial coherence, 257
partial dark field illumination, 67
particle image velocimetry, 45
phase errors, 419
photopolarimeters, 233
photorefractive eect, 111, 345
photoresist emulsion, 97
Placido disc, 339
plankton, 25
polarization, 233
position identification, 377
powder metallurgy, 75
power extraction, 135
power rippling, 125
profilometry, 327
pulse holography, 249
pupils, 165
PVA, 117

Q-switching, 229

radiometry, 41
redundant bit representation, 281
refraction measurement, 495
refractive index, 117
refractive index measurement, 63
resolution, 377
rotating mirrors, 475
roughness, 271

Sagnac interferometers, 333
scanning probe technology, 433
Schell-model beams, 165
sensors, 121
shadow optical system, 291
shared content-addressable memory, 151
sheet steel, 307
signal processing, 371
signed digit numbers, 151
simulated Raman scattering, 275
slope eciency, 207
solitons, 411
spatial coherence, 93

Keyword Index

(Continued)

spatial light modulators, 151
speckle, 187
speckle correlation, 271
speckle metrology, 415
spectral filters, 267
submersible instrumentation, 35
switching power, 353
synthetic sources, 489

TDI, 327
thermal lensing, 301
thickness measurement, 63
three-dimensional cameras, 239
threshold fluence, 349
threshold power, 207
time of flight, 239
titanium, 121
transient vibrations, 505
transparent plates, 63
transverse structures, 401
trinary signed-digit, 281
truth tables, 151, 281
tunable lasers, 349
turbulence, 51
two-beam coupling, 111

underwater cameras, 45
underwater imaging, 51
upwelling irradiance, 3

vibration amplitudes, 359
vibration analysis, 179
vibrations, 171, 505
vision systems, 239
volume holograms, 321

Walsh functions, 261
waveguide grating routers, 419
waveguides, 79
Wigner function, 257
wire diameter, 463

z-scan, 355
zinc selenide, 355